Periscope.

ANATOMY OF THE NERVOUS SYSTEM.

The Trigeminus Roots. W. BECHTEREW. (*Neurol. Centralbl.*, 1887, p. 289.)

The ascending root of the trigeminus arises from cells which extend in a column from the level of the pyramidal decussation up to the point of exit of the root from the pons. The lowest part of this column is continuous with the posterior horn of the spinal cord. The fibres arising from the cells of this column turn laterally and pass upward in a bundle, semilunar shaped in area, which increases in size as it ascends. This root of the fifth nerve develops later than the other roots in the fœtus. The descending root of the trigeminus joins the ascending root; their fibres mingle and make their exit together. This root has no connection with the motor nucleus.

The motor root of the fifth arises in part from the so-called motor nucleus, in part from fibres which can be traced in the raphé, and thence, after decussating with the opposite root, into the motor nucleus of the opposite side. B. denies that there is any direct connection between the trigeminus nerve and the cerebellum. These results are derived wholly from a study of fœtal brains.

The Hypoglossal Nuclei. P. D. KOCH. (Rev. in *Neurol. Centralbl.*, 1887, p. 291.)

The author has studied the hypoglossal nuclei in a number of the lower animals and in man. He finds that the hypoglossal roots have no connection with the olivary bodies. These roots arise chiefly from the hypoglossal nuclei on the floor of the ventricle. Each nucleus is divisible into an outer group of large cells and an inner group of smaller cells. The nucleus is covered on its posterior surface by a thick layer of nerve fibres which run parallel with the axis of the medulla, and are seen in sagittal sections to connect the cells of the nucleus lying at different levels. Koch names these the fibræ propriæ of the nucleus. There are other fibres mingled with these which join the two nuclei with one another. A few of the fibres of the hypoglossal roots arise from the anterior or accessory nucleus in the formatio reticularis. This nucleus is the representative in the medulla of the anterior horn in the spinal cord — a fact clearly seen in pigeons.

Fibres which pass from these nuclei into the raphé and so join the anterior pyramids of the medulla are considered the means of union of the nuclei with the cortical tracts. M. A. S.

PHYSIOLOGY OF THE NERVOUS SYSTEM.

The Heat Centre.(*Gazetta Degli Ospitali,* 17th Aug., 1887.)

PROF. GIRARD recently reported upon this subject before the Società Eleveziana Delle Scienze Naturali the result of his experiments upon rabbits. He has come to the conclusion that the cerebral centre of thermogenesis is in the corpora striata. Each lesion of the median portion produced an increase of heat well marked, which was not the result of spasm of the vaso-constrictor nerves of the skin. Exciting this region with electricity, there followed a notable increase of heat, justifying the assertion that increase of heat is the result of excitation and not of paralysis. Moreover, after the puncture and excitation of this region of the brain there was considerable increase of urea in the urine, indicating an increase of combustion in the organism; this was accompanied by a perceptible emaciation of the animal.

Girard localized the centre of heat in the median portion of the corpora striata and down toward the base of the brain, and affirms that this apparatus increases the heat under excitation and notably influenced and regulated the production of heat. He thinks that artificial increase of heat is not identical with that of fever. Increased production, at the same time diminished dispersion, of heat from the body are, according to his view, the two conditions essential to fever. GRACE PECKHAM.

The Situation of the Emotional Centres. K. PONTOPPIDAN. (*Centralbl. f. Nervenheilk.,* 1887, p. 521.)

There are certain organic brain lesions in which emotional manifestations such as laughing or crying appear without cause; or in which an emotional cause produces undue effects, *e. g.,* a pain produces laughter. Such symptoms are usually associated with symptoms of disease of the pons and medulla. Recent investigations show that the centres affected in such cases are those in the vicinity of the vasomotor centre in the pons. The author describes three such cases. In the first, any question caused the patient to laugh. In the second, laughing or crying occurred indiscriminately when any attempt at conversation was made by the patient. In the third, fits of laughter occurred without apparent cause —the mere entrance of any one into the room would produce one. In two of these cases autopsies showed the existence of apoplectic clots in the crura cerebri and pons Varolii, and other symptoms of pons disease were present.